

Remarks

This is responsive to the Office Action mailed June 28, 2007. The remarks are proper, do not introduce new matter, and are not narrowing of claim scope in any way.

At the outset, Applicant expresses its gratitude to the Office for withdrawing the finality of the Office Action of February 7, 2007.

However, absent the requested reconsideration, this case is presently not in condition for appeal at least for the following reasons as explained below.

1. In the 102 rejection of claim 30 over Rauscher '201 there is an unresolved factual issue that the Office has not provided evidence substantiating why it is reasonable to read the *common enclosure* term onto the separately enclosed controller and data storage devices of the cited reference, and an unresolved legal issue that the Office has not provided evidence substantiating its rationale for maintaining the rejection in response to Applicant's rebuttal of it. The skilled artisan readily understands the difference between the claimed subject matter and what the cited reference discloses, such that these unresolved issues do not rise to the level of a bona fide matter for appeal.

2. In the 102 rejection of claims 30, 38, 55, 56, and 58 over Rauscher '201 there is an unresolved factual issue that the Office has not provided evidence substantiating why it is reasonable to read the *switchable fabric* term onto the point-to-point communications of the cited reference, and an unresolved legal issue that the Office has not provided evidence substantiating its rationale for maintaining the rejection in response to Applicant's rebuttal of it. The skilled artisan readily understands the difference between the claimed subject matter and what the cited reference discloses, such that these unresolved issues do not rise to the level of a bona fide matter for appeal.

3. In the 102 rejection of claims 38, 47, 55, 56, 58, and 59 over Steinmetz ‘260 there is an unresolved factual issue that the Office has not provided evidence substantiating why it is reasonable to read the *switchable fabric* term onto the FC-AL and point-to-point communications of the cited reference, and an unresolved legal issue that the Office has not provided evidence substantiating its rationale for maintaining the rejection in response to Applicant’s rebuttal of it. The skilled artisan readily understands the difference between the claimed subject matter and what the cited reference discloses, such that these unresolved issues do not rise to the level of a bona fide matter for appeal.

4. In the 102 rejection of claim 54 over DeKoning ‘942 there is an unresolved factual issue that the Office has not provided evidence substantiating why it is reasonable to read the recited *two independent signal paths between each location and each controller* onto the one such signal path of the cited reference, and an unresolved legal issue that the Office has not provided evidence substantiating its rationale for maintaining the rejection in response to Applicant’s rebuttal of it. The skilled artisan readily understands the difference between the claimed subject matter and what the cited reference discloses, such that these unresolved issues do not rise to the level of a bona fide matter for appeal.

5. In the 103 rejection of claim 57 over Steinmetz ‘260 and Pignolet ‘828 there is an unresolved factual issue that the Office has not provided evidence substantiating why it is reasonable to read the recited *switchable fabric* onto the FC-AL and point-to-point communications of the cited references, and an unresolved legal issue that the Office has not provided evidence substantiating its rationale for maintaining the rejection in response to Applicant’s rebuttal of it. The skilled artisan readily understands the difference between the

claimed subject matter and what the cited reference discloses, such that these unresolved issues do not rise to the level of a bona fide matter for appeal.

Rejection Under Section 102

Claims 30-34, 36-42, 44-46, 55, 56, and 58 stand rejected as being anticipated by US 2003/0041201 to Rauscher ("Rauscher '201" now US 6,874,100). Applicant respectfully traverses this rejection.

claim 30 - common enclosure

Despite Applicant's admonition,¹ the Office still has not placed any evidence in the record substantiating its position that the rack 700 in Rauscher '201 anticipates *a plurality of data storage devices and redundant storage controllers within a common enclosure* within the broadest reasonable interpretation of that claim phrase. Instead, the Office takes the position that the burden lies with Applicant to substantiate evidence disproving its position:

In order to overcome this rejection, Applicant must disclose, for example how Rauscher's rack is not "same" and "self-contained."²

Applicant has already placed detailed evidence in the record substantiating why it is unreasonable to read the *common enclosure* feature of claim 30 onto the rack 700 in Rauscher '201.³

Summarizing that evidence again for the record, Rauscher '201 encloses the controllers 175, 275 individually in chassis 100, 200, respectively, separate from each other and separate from the data storage devices (DASD) which are enclosed in chassis 300, 400,

¹ Applicant's Response of 4/5/2007 pg. 9 lines 11-12; Applicant's Response of 1/16/2007 pg. 17 lines 1-3, lines 4-6.

² Office Action of 6/28/2007 pg. 4 lines 3-5.

³ Applicant's Response of 4/5/2007 pg. 9 lines 9-11; Applicant's Response of 1/16/2007 ppg. 15-17.

500.⁴ Rauscher '201 encloses the controllers separate from the data storage devices for the purpose of providing a modular arrangement, in direct contravention to the claimed subject matter.⁵

The rack 700 in Rauscher '201 is no more than horizontal shelves 710, 720, 730, 740, 750, 760 supported by vertical ends 705, 715:

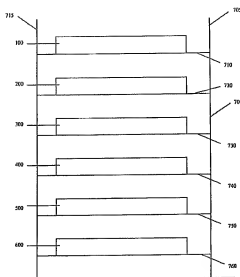


Figure 3

There simply is no evidence in the record substantiating the Office's position that placing separate enclosures 100, 200, 300, 400, 500, 600 on the open shelves of the rack 700 somehow puts them in a "common enclosure." The Office's position not only fails to make common sense to the skilled artisan, it is in fact in direct contravention to Rauscher's purpose of separately enclosing the controllers from each other and from the data storage devices.

Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 30 and the claims depending therefrom because the Office has not shown any evidence

⁴ Applicant's Response of 1/16/2007 ppg. 15-16 citing Rauscher '201 paras. [0052-0056].

⁵ Applicant's Response of 1/16/2007 pg. 16 citing Rauscher '201 paras. [0004], [0025], and [0070].

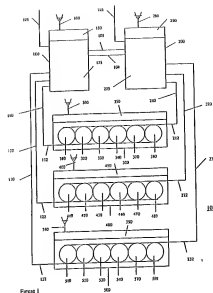
as to why it is reasonable to read the *common enclosure* feature of this claim onto the separately enclosed controller and data storage devices of Rauscher '201. Absent reconsideration, this case is not in condition for appeal due to the unresolved factual issue that one skilled in the art readily understands the difference between the claimed subject matter and the disclosure of the cited reference, and as such that point of contention does not rise to the level of being a bona fide matter for appeal. Furthermore, this case is not in condition for appeal due to the unresolved legal issue that the Office has not shown evidence substantiating its rationale for maintaining the rejection of these claims in response to Applicant's rebuttal of it.

Claims 30, 38, 55, 56, and 58 - switchable fabric

Applicant has placed evidence in the record that Rauscher '201 discloses using merely connectors 110, 120, 130 between the controller 175 and each of the DASDs 310-380, 410-480, 510-580, respectively, and connectors 210, 220, 230 between the controller 275 and the same DASDs, respectively.⁶ Rauscher '201 explicitly discloses these connectors 110, 120, 130, 210, 220, 230 as providing point-to-point communications.⁷

⁶ Applicant's Response of 4/5/2007 pg. 12 lines 1-4; Applicant's Response of 1/16/2007 ppg. 17-21.

⁷ Rauscher '210 para. [0042], claims 17 and 18; Applicant's Response of 4/5/2007 pg. 12 lines 1-4; Microsoft Computer Dictionary, 4th Ed. (emphasis added): **point-to-point configuration** *n.* A communications link in which dedicated links exist between individual origins and destinations, as opposed to a point-to-multipoint configuration, in which the same signal goes to many destinations (such as a cable TV system), or a switched configuration, in which the signal moves from the origin to a switch that routes the signal to one of several possible destinations. Also called point-to-point connection.



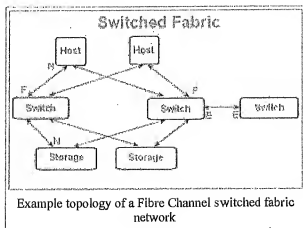
The Office reaches what the skilled artisan recognizes to be an absurd conclusion, based on the misplaced circular logic that (1) Applicant's specification defines switchable fabric to be configurable; (2) Office gives notice that all connectors are configurable to some extent or in some way; so (3) therefore, the point-to-point connectors in Rauscher '201 (allegedly) disclose switchable fabric:

Regarding Applicant's argument (page 12) for "switchable fabric" using citations from Applicant's specification, Applicant will note the use of "may" (as noted previously), as well as "any type of device", "configurable connection" (which is merely a connection capable of being configured, which all connections are to at least some extent or in some way, although notably, Applicant fails to note or claim how such "configuration" is limiting or achieved), and that it shall include "...switches...multiplexers...and other devices". Examiner fails to see how the constructs presented by Rauscher do not meet such a broad and expansive definition. Rauscher, in providing a configurable communication architecture for connecting host/controllers and disks/locations, has provided a "switchable fabric".⁸

⁸ Office Action of 6/28/2007 ppg. 4-5 para. 17

The Office appears to be refusing to construe the term “switchable fabric” in accordance with its plain meaning because the specification is lacking an explicit definition of what the plain meaning is. That is reversible error. During examination claims are given their “broadest reasonable interpretation consistent with the specification.”⁹ The “broadest reasonable interpretation” is the meaning that the skilled artisan would give to the claim term in view of the associated usage provided in the specification.¹⁰ A construction that is inconsistent with the written description would not be arrived at by the skilled artisan, and is therefore not a “reasonable interpretation.”¹¹

Applicant has argued in the record that the term *switchable fabric* connotes plain meaning to the skilled artisan.¹² An example of that plain meaning in the context of host to storage communications is:¹³



⁹ *Phillips v. AWH Corp.*, 75 USPQ2d 1321 (Fed. Cir. 2005)(en Banc); MPEP 2111

¹⁰ *In re American Academy of Science Technical Center*, 70 USPQ2d 1827 (Fed. Cir. 2004); *In re Cortright*, 49 USPQ2d 1463, 1468 (Fed. Cir. 1999); *In re Morris*, 44 USPQ2d 1023 (Fed. Cir. 1997)

¹¹ *Phillips, supra*; *In re Morris, supra*; *In re Zletz*, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989)

¹² Applicant's Response of 4/5/2007 pg. 12 lines 11-13; Applicant's Response of 1/16/2007 pg. 18 lines 8-11, pg. 19 lines 3-5.

¹³ Portion of a screenshot from *Wikipedia*.

The skilled artisan clearly understands that the connectors 110, 120, 130, 210, 220, 230 in Rauscher '201 are a point-to-point configuration and not a switched configuration¹⁴ as recited by the *switchable fabric* feature of these claims.

Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 30, 38, 55, 56, and 58 and the claims depending therefrom because the Office has not shown any evidence as to why it is reasonable to read the *switchable fabric* feature of these claims onto the point-to-point communications of Rauscher '201. Absent reconsideration, this case is not in condition for appeal due to the unresolved factual issue that one skilled in the art readily understands the difference between the claimed subject matter and the disclosure of the cited reference, and as such that unresolved issue does not rise to the level of being a bona fide matter for appeal. Furthermore, this case is not in condition for appeal due to the unresolved legal issue that the Office has not shown evidence substantiating its rationale for maintaining the rejection of these claims in response to Applicant's rebuttal of it.

Rejection Under Section 102

Claims 38, 39, 41, 47-49, 55, 56, 58, and 59 stand rejected as being anticipated by Steinmetz '260. Applicant respectfully traverses this rejection.

Claims 38, 47, 55, 56, 58, and 59 - switchable fabric

The Office has again made the rejection final based on the disclosure of FIG. 10 in Steinmetz '260:

¹⁴ Microsoft Computer Dictionary, 4th Ed. (emphasis added): **switched configuration** *n.* A communications link in which a signal moves from the origin to a switch that routes the signal to one of several possible destinations. Compare point-to-point configuration.

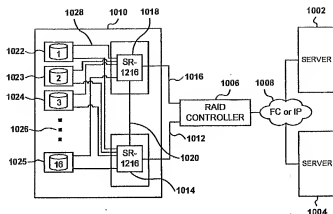
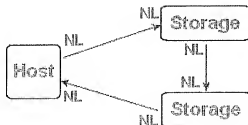


FIGURE 10

Applicant has rebutted that rationale for the rejection.¹⁵ Summarizing that rebuttal again for the record, Steinmetz '260 discloses the controller 1006 connected to shelf routers 1014, 1018 via a fibre channel arbitrated loop ("FC-AL"). The shelf routers 1014, 1018 are, in turn, connected to each of the disk drives 1022-1025 via point-to-point serial links.

The skilled artisan clearly understands that FC-AL is an alternative to using a switched fabric, and is not a switched fabric itself. An example of that common knowledge is:¹⁶

Arbitrated Loop



¹⁵ Applicant's Response of 1/16/2007 ppg. 23-24.

The skilled artisan also clearly understands that the serial point-to-point communications do not involve the use of a switched fabric, for the reasons set forth above in the discussions of Rauscher '201.

Applicant respectfully requests reconsideration and withdrawal of the rejection of claims 38, 47, 55, 56, 58, and 59 and the claims depending therefrom because the Office has not shown any evidence as to why it is reasonable to read the *switchable fabric* feature of these claims onto the FC-AL and point-to-point communications of Steinmetz '260. Absent reconsideration, this case is not in condition for appeal due to the unresolved factual issue that one skilled in the art readily understands the difference between the claimed subject matter and the disclosure of the cited reference, and as such that unresolved issue does not rise to the level of being a bona fide matter for appeal. Furthermore, this case is not in condition for appeal due to the unresolved legal issue that the Office has not shown evidence substantiating its rationale for maintaining the rejection of these claims in response to Applicant's rebuttal of it.

Rejection Under Section 102

Claim 53 stands rejected as being anticipated by US 20030126315 to Tan (now US 7,111,084). Applicant reiterates that Tan '315 discloses point-to-point communications between each controller and the data storage devices.¹⁷ Also, for the reasons set forth above, Applicant has placed evidence in the record substantiating that the skilled artisan readily understands that point-to-point communications is not a *switchable fabric* as claimed.

¹⁶ Portion of a screenshot from *Wikipedia*.

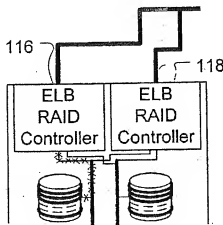
¹⁷ Applicant's Response of 4/5/2007 ppg. 15-16, citing Tan '315 para. [0031] lines 10-12.

Nonetheless, and solely in order to simplify the outstanding issues for reconsideration or appeal, Applicant has canceled claim 53 without prejudice.

Rejection Under Section 102

Claim 54 stands rejected as being unpatentable over DeKoning '942. Applicant respectfully traverses this rejection.

Applicant has placed evidence in the record that DeKoning '942 does not identically disclose *a plurality of data storage locations that are accessible to each of a plurality of controllers via circuitry that defines at least two independent signal paths between each location and each controller*.¹⁸ Applicant offers the following additional evidence, which is an enlarged and marked-up portion of FIG. 3 of DeKoning '942:



One signal path between the data storage location and controller 116 has been marked-up with "X". It will be noted that there is no second independent signal path between that storage location and controller 116. Rather, Applicant reiterates that DeKoning '942 discloses two signal paths from a storage location to two different controllers.

DeKoning '942 is silent regarding *circuity that defines at least two independent signal paths between each location and each controller* as claimed.

Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 54 because the Office has not shown any evidence as to why it is reasonable to read *two independent signal paths between each location and each controller* onto the disclosure of DeKoning '942. Absent reconsideration, this case is not in condition for appeal due to the unresolved factual issue that one skilled in the art readily understands the difference between the claimed subject matter and the disclosure of the cited reference, and as such that unresolved issue does not rise to the level of being a bona fide matter for appeal. Furthermore, this case is not in condition for appeal due to the unresolved legal issue that the Office has not shown evidence substantiating its rationale for maintaining the rejection of these claims in response to Applicant's rebuttal of it.

Rejection Under Section 103

Claims 35 and 43 stand rejected as being unpatentable over Rauscher '201 in view of Grieshaber '106. Applicant respectfully traverses this rejection.

Applicant reiterates that these claims are allowable because Grieshaber '106 fails to cure the deficiencies of Rauscher '201 detailed above, and because they depend from an allowable independent claim, for reasons above, and recite additional limitations thereto.

Reconsideration and withdrawal of the rejection of claims 35 and 43 are respectfully requested.

¹⁸ Applicant's Response of 4/5/2007 ppg. 16-17.

Rejection Under Section 103

Claims 50-52, and 57 stand rejected as being unpatentable over Steinmetz '260 in view of Pignolet '828. Applicant respectfully traverses this rejection.

Claims 50-52 are allowable because Pignolet '828 fails to cure the deficiencies of Steinmetz '260 that are detailed above, and because they depend from an allowable independent claim, for reasons above, and recite additional limitations thereto. Reconsideration and withdrawal of the rejection of claims 50-52 are respectfully requested.

As for claim 57, Applicant reiterates that the Examiner has failed to substantiate a prima facie case of obviousness because Steinmetz '260 and Pignolet '828, neither alone nor together, teach or suggest *dual ported storage controllers with a first port connected to a first switchable fabric and a second port connected to a second switchable fabric, the fabrics, in turn, connected to a plurality of data storage devices* as claimed. As discussed above, Steinmetz '260 discloses a FC-AL topology connecting the controller to the shelf routers, and discrete point-to-point serial links between the shelf routers and the data storage devices. Neither the FC-AL nor the point-to-point links discloses nor necessarily requires *switchable fabric* as in the present embodiments as claimed. Pignolet '828 is wholly silent regarding the use of a *switchable fabric* as claimed and does not cure the deficiency of Steinmetz '260.

Applicant respectfully requests reconsideration and withdrawal of the rejection of claim 57 because the Office has not shown any evidence as to why it is reasonable to read the *switchable fabric* feature onto the FC-AL and point-to-point communications disclosed in Steinmetz '260. Absent reconsideration, this case is not in condition for appeal due to the unresolved factual issue that one skilled in the art readily understands the difference between the claimed subject matter and the disclosure of the cited reference, and as such that

unresolved issue does not rise to the level of being a bona fide matter for appeal.

Furthermore, this case is not in condition for appeal due to the unresolved legal issue that the Office has not shown evidence substantiating its rationale for maintaining the rejection of these claims in response to Applicant's rebuttal of it.

Conclusion

This is a complete response to the Office Action mailed June 28, 2007.

Applicant has also filed another request for telephone interview in the absence of all pending claims passing to allowance. Applicant regrets the Examiner did not grant the first or second requested interviews, believing that many of the unresolved issues leaving this case not in condition for appeal could have been prevented had the interviews been granted. The telephone interview is necessary now to resolve those issues that are not bona fide matters for appeal.

Respectfully submitted,

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